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EXAMINER	
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ART UNIT	PAPER NUMBER
2121	15

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/887,188	BURGESS ET AL.	
	Examiner	Art Unit	
	Wilbert L. Starks, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sh et with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 14.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-89 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-89 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. §101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the invention as disclosed in claims 1-89 is directed to non-statutory subject matter.

2. Claims 1-9, 19-27, 36-44, 54-62, and 72-80 are not claimed to be practiced on a computer, therefore, it is clear that the claims are not limited to practice in the technological arts. On that basis alone, they are clearly nonstatutory.

3. Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 USC §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

> ...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicant's "indicia representative of a store goal" references are just such abstract ideas.

4. Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the same line of cases as the *Alappat-State Street Bank* decisions and is in complete agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

> Today we hold that *the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price*, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result" – *a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades*. (emphasis added) *State Street Bank* at 1601.

5. True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se statutory*. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."

6. The court was being very specific.

7. Additionally, the court was also careful to specify that the "useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." (i.e. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer – i.e., "post-processing activity".)

8. Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

9. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

> ...[T]he dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating 'abstract ideas' or 'natural phenomena' ... As the Supreme Court has made clear, '[a]n idea of itself is not patentable, ... *taking several abstract ideas and manipulating them together adds nothing to the basic equation*. In re Warmerdam 31 USPQ2d at 1759 (emphasis added).

10. Since the Federal Circuit held in *Warmerdam* that this is the "dispositive issue" when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is "useful, concrete, and tangible" in similar cases. Accordingly, the Examiner finds that Applicant manipulated a set of abstract "indicia representative of a store goal" to solve purely algorithmic problems in the abstract (i.e., what *kind* of "indicia" are used? Are they in the natural language format? Algebraic word problems? Boolean logic problems? Fuzzy logic algorithms? Probabilistic word problems? Philosophical ideas? Even vague expressions, about which even reasonable persons could differ as to their meaning? Combinations thereof?) Clearly, a claim for manipulation of "indicia representative of a store goal" is provably even more abstract (and thereby less limited in practical application) than pure "mathematical algorithms" which the Supreme Court has held are per se nonstatutory – in fact, it *includes* the expression of nonstatutory mathematical algorithms.

11. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. 101 doctrine.

12. Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of "useful, concrete, and tangible" the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a "useful, concrete and tangible result". There is only manipulation of abstract ideas.

13. The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The Court reminded us that:

> Finally, **the decision in In re Warmerdam**, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) **is not to the contrary**. *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that **'taking several abstract ideas and manipulating them together adds nothing to the basic equation'**; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court's conclusion on the facts, the **holding** of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) AT&T Corp. v. Excel Communications, Inc., 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

14. Remember that in *In re Warmerdam*, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the "useful, concrete, and tangible" nature of a set of claims under 101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the dispositive issue in this analogous case.

15. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicant's phrase "indicia representative of a store goal" is simply an abstract construct that does not limit the claims to the transformation of real world data (such as monetary data or heart rhythm data)

by some disclosed process. Consequently, the necessary conclusion under *AT&T*, *State Street* and *Warmerdam,* is straightforward and clear. The claims take several abstract ideas (i.e., "indicia representative of a store goal" in the abstract) and manipulate them together adding nothing to the basic equation. Claims 1-89 are, thereby, rejected under 35 U.S.C. 101.

16. Regarding the "system" recitals in claims 10 – 18, 28-35, 45-53, 63-71, and 81-89, the invention is still found to be nonstatutory. Any other finding would be at variance with current case law. Specifically, the Federal Circuit held in *AT&T v. Excel*, 50 USPQ2d 1447 (Fed. Cir. 1999) that:

> Whether stated implicitly or explicitly, we consider the scope of Section 101 to be **the same regardless of the form** – machine or process – in which a particular claim is drafted. AT&T v. Excel, 50 USPQ2d 1447, 1452 citing In re Alappat, 33 F.3d at 1581, 31 USPQ2d at 1589 (Rader, J., concurring) (emphasis added.)

17. Examiner considers the scope of Section 101 to be the same regardless of whether Applicant *claims* a "process", "machine", or "product of manufacture". While the "system" recitals in the preambles of claims 10 – 18, 28-35, 45-53, 63-71, and 81-89 make the claims ostensibly drawn to be "apparatus" claims, they are insufficient by themselves to limit the claims to statutory subject matter. Examiner's position is clearly consistent with *Alappat,* and *AT&T* and is implicitly consistent with *Warmerdam* and *State Street*. Accordingly, those claims are also properly rejected.

Claim R j ctions - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-89 are rejected under 35 USC 112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a 101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the MPEP puts it:

> ("The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. 101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application **also fails as a matter of law** to enable one of ordinary skill in the art to use the invention under 35 U.S.C. § 112."); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention**.").See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-89 are rejected on this basis.

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. §101 which states that "whoever invents or discovers any new and useful process... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg* Co., 151 U.S. 186 (1894); In *re Ockert,* 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and In *re* Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

2. A statutory type (35 U.S.C. §101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope., The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. §101.

3. Claims 1-4, 9, 10, 12, 13, 18-26, 28-33, 36-38, 40-47, 49-58, 61, 63-67, 70, 72-76, 79 85, and 88-89 are rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-19 of prior U.S. Patent No. 6,003,021.[1] This is a double patenting rejection.

Claim 1

Claim 1's "(a) receiving an indicia representative of a store goal;" is anticipated by Zadik et al, claim 1(a), where it recites:"(a) accessing the

information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative** of a **goal;"** (emphasis added).

Claim 1's " b) **integrating** retail information that provides assistance with achieving the store goal;" is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Claim 1's "(c) **monitoring** progress of a student **toward the store goal;** an" is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) **monitoring** answers to questions nosed **to evaluate progress toward the goal** utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 1's "(d) **providing feedback** assisting the student in accomplishing the store **goal**." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and **providing** dynamic, **goal-based**, remediation learning **information feedback** from a remediation object component including a knowledge system and a **software tutor** comprising an artificial intelligence engine which generates

[1] Zadik et al (U.S. Patent Number 6,003,021; dated 12/14/1999; class 706; subclass 047).

> **individualized coaching** messages to further **motivate accomplishment of the goal** in the simulated environment."

Claim 2

Claim 2's "A method for creating a presentation as recited in claim 1, including the step of **indexing** media information to enhance the **integration** of the media information into the presentation." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using an index is well within the broadest reasonable interpretation of this prior art. The fact that the use of an index is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 153, fin. 17-19), where it recites: "When the user selects a month, the application uses the **index** of the combobox to find the ControlSourceItem and pass that to the simulation engine."

Claim 3

Claim 3's "A method for creating a presentation that **simulates the operations of a store** as recited in claim 1, wherein **inventory control** is integrated into the presentation." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to integrate goal-based learning information in a structured, **dynamic business simulation**

> designed by a profiling component to motivate accomplishment of the goal; and

Using an inventory control is well within the broadest reasonable interpretation of this prior art. The fact that the use of an inventory control is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 6, lin. 50-51), where it recites: "An object can represent an **inventory**, such as a personnel file or a table of the latitudes and longitudes of cities."

Claim 4

Claim 4's "A method for creating a presentation that **simulates** the operations of a store as recited in claim 1, wherein **pricing** strategy is integrated into the presentation." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to integrate goal-based learning information in a structured, **dynamic business simulation** designed by a profiling component to motivate accomplishment of the goal; and

Using a pricing strategy is well within the broadest reasonable interpretation of this prior art. The fact that the use of a pricing strategy is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, cot. 156, lin. 37-53) , where it recites:

> " FIG. 75 presents the detailed design of smart spreadsheets in accordance with a preferred embodiment. Processing commences at function block 7500 where the excel spreadsheet is designed to model to perform scenario planning for the application that the **business simulation** is targeted for. By way of example, a model

> for real estate that analyzes an own versus rent decision is utilized to convey features in accordance with a preferred embodiment. Function block 7510 illustrates the next step which entails associating drivers for specific analysis tasks that are used in the model. For example, the **price** of unit, down payment, tax rate, estimated appreciation, assessment, rent, annual rent increase, type of loan, and salary will each be utilized in evaluating an formulating the decision. Then, at function block 7520, a loan amortization schedule is created to track the ten year equity growth, tax savings, portfolio value, net gain/loss schedules."

Claim 9

Claim 9's "A method for creating a presentation that **simulates** the operations of a store as recited in claim 1, including the step of **adjusting an example based on the student's progress**." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to integrate goal-based learning information in a structured, **dynamic business simulation** designed by a profiling component to motivate accomplishment of the goal; and

Using an adjustable example is well within the broadest reasonable interpretation of this prior art. The fact that the use of an adjustable example is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 21, lin. 51-67; col. 22, lin. 1-18) , where it recites:

> "Example Domain Model
>
> The domain model is created by the instructional designer in a visual editing design tool called the Knowledge Workbench. The designer creates the objects of the domain model using generic entities and properties; that is, not having specific values associated with the entities and properties.
>
> At runtime, an application's domain model is instantiated so that every entity and property is given a particular value that makes it

unique. The result of a domain model instantiation is called the domain. The values of a domain's entities and properties can change
throughout the course of the simulation based on student actions and updates from other components. FIG. 8 illustrates an instantiated domain model in accordance with a preferred embodiment.

Example Domain

Creating a domain model in data rather than in code facilitates reuse of the components in multiple applications in multiple domains without code changes. For example, a typical application in the Financial Services domain would have to define classes in code such as `Customer`, `Account`, etc. An Insurance Domain application might have classes such as `Customer`, `Incident`, `Prior Policy`, etc. To be able to perform analysis on any of these classes, the analysis logic must be coded to recognize the classes. This requires all logic to be custom-coded for every application; an effort-intensive undertaking that demands a high degree of technical skill.

By modeling the domain in data using generic objects, we can build standard generic analysis capability that can be applied to the domain. This allows implementation of analysis logic with much less effort by people with a low degree of technical skill. Functional experts can create the objects of the domain and apply various types of analysis from a pallet. All of this is accomplished in a visual development environment that supports the designer with visual feedback and only allows valid designs to be created."

Claim 10

Claim 10's "(e) **a processor**;" is anticipated by Zadik et al, claim 10, where it recites:

"10. An apparatus that creates a multimedia business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational environment, comprising: (a) **a processor**;"

Claim 10's "(f) a **memory** that stores information under the control of the **processor**;" is anticipated by Zadik et al, claim 10, where it recites:

> "a **memory** that stores information in the spreadsheet object component of the rule-based expert system under the control of the **processor** that includes data, calculations required for the simulation and communication information;"

Claim 10's "(g) **logic** that receives indicia representative of a store **goal**;" is anticipated by Zadik et al, claim 10, where it recites: "(e) **logic** that **accesses** the data in the spreadsheet object component of the rule-based expert system to determine presentation **information indicative** of a **goal**;"

Claim 10's "(h) logic that integrates **retail information** that provides assistance with **achieving the store goal**; and" is anticipated by Zadik et al, claim 10, where it recites: " is anticipated by Zadik et al, claim 10 where it recites:

> 10. An apparatus that creates a multimedia **business simulation** utilizing a rule-based expert system with a spreadsheet object component to provide a **goal based educational environment**, comprising:

Using retail information is well within the broadest reasonable interpretation of this prior art. The fact that the use of retail information is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 11, lin. 21-37), where it recites:

> " Relationship of Components
>
> The simulation model executes the business function that the student is learning and is therefore the center point of the application. An activity `layer` allows the user to visually guide the simulation by passing inputs into the simulation engine and receiving an output from the simulation model. For example, if the student was working on an income statement activity, the **net sales** and cost of goods sold calculations are passed as inputs to the

> simulation model and the net income value is calculated and retrieved as an output. As calculations are passed to and retrieved from the simulation model, they are also passed to the Intelligent Coaching Agent (ICA). The ICA analyzes the Inputs and Outputs to the simulation model and generates feedback based on a set of rules. This feedback is received and displayed through the Visual Basic Architecture."

Claim 10's "**logic that monitors progress** of a student **toward the store goal** and provides **feedback** that **assists the student** in accomplishing the store goal." is anticipated by Zadik et al, claim 10, where it recites:

> "(g) **logic that monitors** answers to questions posed to evaluate **progress toward the goal** utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information **feedback** from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized **coaching** messages that further motivates accomplishment of the goal in the simulated environment."

Claim 12

Claim 12's "12. An apparatus that creates a presentation as recited in claim 10, wherein inventory control is integrated into the presentation." is anticipated by Zadik et al, claim 10, where it recites: " (c) a **display** under the control of the processor;"

Claim 13

Claim 13's "13. An apparatus that creates a presentation as recited in claim 10, wherein pricing strategy is integrated into the presentation." is anticipated by Zadik et al, claim 10 where it recites:

> 10. An apparatus that creates a multimedia **business simulation** utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational environment, comprising:

Using a pricing strategy is well within the broadest reasonable interpretation of this prior art. The fact that the use of a pricing strategy is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 156, lin. 37-53) , where it recites:

> "FIG. 75 presents the detailed design of smart spreadsheets in accordance with a preferred embodiment. Processing commences at function block 7500 where the excel spreadsheet is designed to model to perform scenario planning for the application that the **business simulation** is targeted for. By way of example, a model for real estate that analyzes an own versus rent decision is utilized to convey features in accordance with a preferred embodiment. Function block 7510 illustrates the next step which entails associating drivers for specific analysis tasks that are used in the model. For example, the **price of unit**, down payment, tax rate, estimated appreciation, assessment, rent, annual rent increase, type of loan, and salary will each be utilized in evaluating an formulating the decision. Then, at function block 7520, a loan amortization schedule is created to track the ten year equity growth, tax savings, portfolio value, net gain/loss schedules."

Claim 18

Claim 18's "18. An apparatus that **creates a presentation** as recited in claim 10, including logic that adjusts an example based on the student's progress." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to integrate goal-based learning information in a structured, **dynamic business simulation** designed by a profiling component to motivate accomplishment of the goal; and

Using an adjustable example is well within the broadest reasonable interpretation of this prior art. The fact that the use of an adjustable example is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 21, lin. 51-67; col. 22, lin. 1-18) , where it recites:

> "Example Domain Model
>
> The domain model is created by the instructional designer in a visual editing design tool called the Knowledge Workbench. The designer creates the objects of the domain model using generic entities and properties; that is, not having specific values associated with the entities and properties.
>
> At runtime, an application's domain model is instantiated so that every entity and property is given a particular value that makes it unique. The result of a domain model instantiation is called the domain. The values of a domain's entities and properties can change
> throughout the course of the simulation based on student actions and updates from other components. FIG. 8 illustrates an instantiated domain model in accordance with a preferred embodiment.
>
> Example Domain
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> Creating a domain model in data rather than in code facilitates reuse of the components in multiple applications in multiple domains without code changes. For example, a typical application in the Financial Services domain would have to define classes in code such as `Customer`, `Account`, etc. An Insurance Domain application might have classes such as `Customer`, `Incident`, `Prior Policy`, etc. To be able to perform analysis on any of these classes, the analysis logic must be coded to recognize the classes. This requires all logic to be custom-coded for every application; an effort-intensive undertaking that demands a high degree of technical skill.
>
> By modeling the domain in data using generic objects, we can build standard generic analysis capability that can be applied to the domain. This allows implementation of analysis logic with much less effort by people with a low degree of technical skill. Functional experts can create the objects of the domain and apply various types of analysis from a pallet. All of this is accomplished in a visual development environment that supports the designer with visual feedback and only allows valid designs to be created."

Claim 19

Claim 19's "(a) receiving information indicative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative of a goal;"** (emphasis added).

Claim 19's "(b) integrating information that **motivates accomplishment** of the goal; and" is anticipated by Zadik et al, claim 10, where it recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further **motivates accomplishment of the goal** in the simulated environment."

Claim 19's "(c) evaluating the progress toward the goal and providing **feedback that further motivates accomplishment** of the goal." is anticipated by Zadik et al, claim 10, where it recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further **motivates accomplishment of the goal** in the simulated environment."

Claim 20

Claim 20's "20. A method for creating a presentation as recited in claim 19, including the step of **linking** information that motivates accomplishment of the goal to the presentation." is anticipated by Zadik et al, col. 25, lin. 49-59, where it recites:

> "As the design phase progresses, the designer adds more detail to the design of the Concept hierarchy by painting in Coach Topics that the student may need feedback on. The designer can associate multiple feedback topics with each Concept. The designer also characterizes each topic as being Praise, Polish, Focus, Redirect or one of several other types of feedback that are consistent with a proven remediation methodology. The designer can then fill each topic with text, video war stories, Web page links, Authorware **links**, or any other media object that can be delivered to the student as part of the feedback topic."

Claim 21

Claim 21's "21. A method for creating a presentation as recited in claim 19, wherein the information includes **electronic mail** information." is anticipated by Zadik et al, col. 17, lin. 34-45, where it recites:

> "Clients may also desire to track students' progress, or control their advancement through the course. Under this strategy, after a student completes a section of the course, he will transfer his progress data to a processing center either **electronically** or by physically mailing a disk. There it can be analyzed to verify that he completed all required work satisfactorily. One difficulty commonly associated with student tracking is isolating the student data for analysis. It can be unwieldy to transmit all the course data, so it is often imperative to isolate the minimum data required to perform the necessary analysis of the student's progress."

Claim 22

Claim 22's "22. A method for creating a presentation as recited in claim 19, wherein the information includes **simulation information**." is anticipated by Zadik et al, col. 156, lin. 37-53, where it recites:

> "FIG. 75 presents the detailed design of smart spreadsheets in accordance with a preferred embodiment. Processing commences at function block 7500 where the excel spreadsheet is designed to model to perform scenario planning for the application that the **business simulation** is targeted for. By way of example, a model for real estate that analyzes an own versus rent decision is utilized to convey features in accordance with a preferred embodiment. Function block 7510 illustrates the next step which entails associating drivers for specific analysis tasks that are used in the model. For example, the **price of unit**, down payment, tax rate, estimated appreciation, assessment, rent, annual rent increase, type of loan, and salary will each be utilized in evaluating an formulating the decision. Then, at function block 7520, a loan amortization schedule is created to track the ten year equity growth, tax savings, portfolio value, net gain/loss schedules."

Claim 23

Claim 23's "23. A method for creating a presentation as recited in claim 19, wherein the information includes **time-synchronized multimedia information.**" is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to integrate goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using synchronized multimedia is well within the broadest reasonable interpretation of this prior art. The fact that the use of synchronized multimedia is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Abstract (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 24

Claim 24's "24. A method for creating a presentation as recited in claim 19, wherein the information includes video **conference** information." is anticipated by Zadik et al, col. 15, lin. 3549, where it recites:

> "In the Design Phase, instructional designers become oriented to the content area and begin to conceptualize an instructional approach. They familiarize themselves with the subject matter through reading materials and interviews with Subject Matter Experts (SMEs). They also identify learning objectives from key client contacts. Conceptual designs for student interactions and interface layouts also begin to emerge. After the conceptual designs have taken shape, Low-Fi user testing (a.k.a. **Conference** Room Piloting) is performed. Students interact with interface mock-ups while facilitators observe and record any issues. Finally, detailed designs are created that incorporate findings. These detailed designs are handed off to the development team for implementation."

Claim 25

Claim 25's "25. A method for creating a presentation as recited in claim 19, wherein the information emanates from the Internet." is anticipated by Zadik et al, col. 9, lin. 34-67; col. 10, lin. 1-10, where it recites:

> "Thus, through the development of frameworks for solutions to various problems and programming tasks, significant reductions in the design and development effort for software can be achieved. A preferred embodiment of the invention utilizes HyperText Markup Language (HTML) **to implement documents on the Internet** together "with a general-purpose secure communication protocol for a transport medium between the client and the Newco. HTTP or other protocols could be readily substituted for HTML without undue experimentation. Information on these products is available in T. Berners-Lee, D. Connoly, "RFC 1866: Hypertext Markup Language--2.0" (November, 1995); and R. Fielding, H, Frystyk, T. Berners-Lee, J. Gettys and J. C. Mogul, "Hypertextransfer Protocol--HTTP/1.1:HTTP Working Group Internet Draft" (May 2, 1996). HTML is a simple data format used to create hypertext documents that are portable from one platform to another. HTML documents are SGML documents with generic semantics that are appropriate for representing information from a wide range of domains. HTML has been in use by the World-Wide Web global information initiative since 1990. HTML is an application of ISO Standard 8879; 1986 Information Processing Text and Office Systems: Standard Generalized Markup Language (SGML)."

Claim 26

Claim 26's "26. A method for creating a presentation as recited in claim 19, wherein the information includes telephony information." is anticipated by Zadik et al, Fig. 16.

Claim 28

Claim 28's "(a) **a processor**;" is anticipated by Zadik et al, claim 10, where it recites:

> "10. An apparatus that creates a multimedia business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational environment, comprising: (a) **a processor**;"

Claim 28's "(b) **a memory** that stores information under the control of the processor;" is anticipated by Zadik et al, claim 10, where it recites:

> "a **memory** that stores information in the spreadsheet object component of the rule-based expert system under the control of the **processor** that includes data, calculations required for the simulation and communication information;"

Claim 28's "(c) logic that receives information indicative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the information in the spreadsheet object component of the rule-based expert system to **retrieve** information **indicative of a goal;"** (emphasis added).

Claim 28's "(d) logic that integrates information that motivates accomplishment of the goal" is anticipated by Zadik et al, claim 10, where it recites:

> (g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further motivates accomplishment of the goal in the simulated environment.

Claim 28's "(e) logic that evaluates the progress toward the goal and provides feedback that further motivates accomplishment of the goal." is anticipated by Zadik et al, claim 10, where it recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information **feedback** from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further **motivates accomplishment** of the goal in the simulated environment."

Claim 29

Claim 29's " 29. An apparatus that creates a presentation as recited in claim 28, wherein the information includes video information." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using video information is well within the broadest reasonable interpretation of this prior art. The fact that the use of video information is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Abstract (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchroniz d video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the

> system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 30

Claim 30's " 30. An apparatus that creates a presentation as recited in claim 28, wherein the information includes electronic mail information." is anticipated by Zadik et al, cot. 17, lin. 34-45, where it recites:

> "Clients may also desire to track students' progress, or control their advancement through the course. Under this strategy, after a student completes a section of the course, he will transfer his progress data to a processing center **either electronically or by physically mailing a disk**. There it can be analyzed to verify that he completed all required work satisfactorily. One difficulty commonly associated with student tracking is isolating the student data for analysis. It can be unwieldy to transmit all the course data, so it is often imperative to isolate the minimum data required to perform the necessary analysis of the student's progress."

Claim 31

Claim 31's " 31. An apparatus that creates a presentation as recited in claim 28, wherein the information includes time-synchronized multimedia information" is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using synchronized multimedia is well within the broadest reasonable interpretation of this prior art. The fact that the use of synchronized multimedia is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Abstract (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 32

Claim 32's "32. An apparatus that creates a presentation as recited in claim 28, wherein the information includes video conference information." is anticipated by Zadik et al, col. 15, lin. 35-49, where it recites:

> "In the Design Phase, instructional designers become oriented to the content area and begin to conceptualize an instructional approach. They familiarize themselves with the subject matter through reading materials and interviews with Subject Matter Experts (SMEs). They also identify learning objectives from key client contacts. Conceptual designs for student interactions and interface layouts also begin to emerge. After the conceptual designs have taken shape, Low-Fi user testing (a.k.a. **Conference** Room Piloting) is performed. Students interact with interface mock-ups while facilitators observe and record any issues. Finally, detailed designs are created that incorporate findings. These detailed designs arc handed off to the development team for implementation."

Claim 33

Claim 33's "33. An apparatus that creates a presentation as recited in claim 28, wherein the information emanates from the Internet." is anticipated by Zadik et al, col. 9, lin. 34-67; col. 10, lin. 1-10, where it recites:

> "Thus, through the development of frameworks for solutions to various problems and programming tasks, significant reductions in the design and development effort for software can be achieved. A preferred embodiment of the invention utilizes HyperText Markup Language (HTML) to **implement documents on the Internet** together with a general-purpose secure communication protocol for a transport medium between the client and the Newco. HTTP or other protocols could be readily substituted for HTML without undue, experimentation. Information on these products is available in T. Bemers-Lee, D. Connoly, "RFC 1866: Hypertext Markup Language--2.0" (November, 1995); and R. Fielding, H, Frystyk, T. Berners-Lee, J. Gettys and J. C. Mogul, "Hypertext Transfer Protocol--HTTP/1.1:HTTP Working Group Internet Draft" (May 2, 1996). HTML is a simple data format used to create hypertext documents that are portable from one platform to another. HTML documents are SGML documents with generic semantics that are appropriate for representing information from a wide range of domains. HTML has been in use by the World-Wide Web global information initiative since 1990. HTML is an application of ISO Standard 8879; 1986 Information Processing Text and Office Systems; Standard Generalized Markup Language (SGML)."

Claim 36

Claim 36's "(a) presenting information indicative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative of a goal,"** (emphasis added).

Claim 36's "(b) integrating information that motivates accomplishment of the goal;" is anticipated by Zadik et al, claim 10,where it recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further **motivates accomplishment** of the goal in the simulated environment."

Claim 36's "(c) querying a user for answers to one or more questions based on one or more learning objectives of the presentation using a simulated human conversation; and" is anticipated by Zadik et al, claim 7, where it recites:

> " 7. A method for creating a business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational learning experience as recited in claim 1, including the step of simulating a conversation in the **simulated environment.**"

Claim 36's "(d) monitoring progress toward the goal and providing feedback that further motivates accomplishment of the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 37

Claim 37's " 37. A method for creating a presentation as recited in claim 36, including the step of indexing media information to enhance the integration of the media information into the presentation." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using an index is well within the broadest reasonable interpretation of this prior art. The fact that the use of an index is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 153, fin. 17-19), where it recites: "When the user selects a

month, the application uses the **index** of the combobox to find the ControlSourceItem and pass that to the simulation engine."

Claim 38

Claim 38's " 38. A method for creating a presentation as recited in claim 36, including the step of synchronizing the media information with other information in the presentation utilizing time and the indexing." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using an index is well within the broadest reasonable interpretation of this prior art. The fact that the use of an index is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 153, fin. 17-19), where it recites: "When the user selects a month, the application uses the **index** of the combobox to find the ControlSourceItem and pass that to the simulation engine."

Also, (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-uvith **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the

> system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 40

Claim 40's "40. A method for creating a presentation as recited in claim 36, wherein the media information comprises **video** information." is anticipated by Zadik et al, col. 15, lin. 66-67; col. 16, lin. 1-13, where it recites:

> "During the build phase, the application development team uses the detailed designs to code the application. Coding tasks include the interfaces and widgets that the student interacts with. The interfaces can be made up of buttons, grids, check boxes, or any other screen controls that allow the student to view and manipulate his deliverables. The developer must also code logic that analyzes the student's work and provides feedback interactions. These interactions may take the form of text and/or multimedia feedback from simulated team members, conversations with simulated team members, or direct manipulations of the student's work by simulated team members. In parallel with these coding efforts, graphics, **videos**, and audio are being created for use in the application. Managing the development of these assets have their own complications."

Claim 41

Claim 41's "41. A method for creating a presentation as recited in claim 36, wherein the media information comprises **audio** information." is anticipated by Zadik et al, col. 15, lin. 66-67; col. 16, lin. 1-13, where it recites:

> "During the build phase, the application development team uses the detailed designs to code the application. Coding tasks include the interfaces and widgets that the student interacts with. The interfaces can be made up of buttons, grids, check boxes, or any other screen controls that allow the student to view and manipulate his deliverables. The developer must also code logic that analyzes the student's work and provides feedback interactions. These interactions may take the form of text and/or multimedia feedback from simulated team members, conversations with simulated team members, or direct manipulations of the student's work by simulated team members. In parallel with these coding efforts, graphics, videos, and **audio** are being created for use in the application.

> Managing the development of these assets have their own complications."

Claim 42

Claim 42's " A method for creating a presentation as recited in claim 36, wherein the media information comprises **dialog** information." is anticipated by Zadik et al, col. 8, lin. 8-20, where it recites:

> "Class libraries are very flexible. As programs grow more complex, more programmers are forced to reinvent basic solutions to basic problems over and over again. A relatively new extension of the class library concept is to have a framework of class libraries. This framework is more complex and consists of significant collections of collaborating classes that capture both the small scale patterns and major mechanisms that implement the common requirements and design in a specific application domain. They were first developed to free application programmers from the chores involved in displaying menus, windows, **dialog boxes**, and other standard user interface elements for personal computers."

Claim 43

Claim 43's "43. A method for creating a presentation as recited in claim 36, wherein the media information comprises Internet information." is anticipated by Zadik et al, col. 9, lin. 34-67; col. 10, lin. 1-10, where it recites:

> "Thus, through the development of frameworks for solutions to various problems and programming tasks, significant reductions in the design and development effort for software can be achieved. A preferred embodiment of the invention utilizes HyperText Markup Language (HTML) to **implement documents on the Internet** together with a general-purpose secure communication protocol for a transport medium between the client and the Newco. HTTP or other protocols could be readily substituted for HTML without undue experimentation. Information on these products is available in T. Berners-Lee, D. Connoly, "RFC 1866: Hypertext Markup Language--2.0" (November, 1995); and R. Fielding, H, Frystyk, T. Berners-Lce, J. Gettys and J. C. Mogul, "Hypertext 'Transfer Protocol--HTTP/l.LHTTP Working Group Internet Draft" (May 2, 1996). HTML is a simple data format used to create hypertext documents that are portable from one platform to another. HTML documents are SGML documents with generic semantics that arc appropriate for representing information from a wide range of domains. HTML has been in use by the World-Wide Web global information initiative since 1990. HTML is an application of ISO Standard 8879; 1986 Information Processing Text and Office Systems; Standard Generalized Markup Language (SGML) "

Claim 44

Claim 44's "44. A method for creating a presentation as recited in claim 36, wherein the media information comprises text information." is anticipated by Zadik et al, col. 15, lin. 66-67; col. 16, lin. 1-13, where it recites:

> "During the build phase, the application development team uses the detailed designs to code the application. Coding tasks include the interfaces and widgets that the student interacts with. The interfaces can be made up of buttons, grids, check boxes, or any other screen controls that allow the student to view and manipulate his deliverables. The developer must also code logic that analyzes the student's work and provides feedback interactions. These interactions may take the form of text and/or multimedia feedback from simulated" team members, conversations with simulated team members, or direct manipulations of the student's work by simulated team members. In parallel with these coding efforts, graphics, videos, and audio are being created for use in the application. Managing the development of these assets have their own complications."

Claim 45

Claim 45's "(a) a processor;" is anticipated by Zadik et al, claim 10, where it recites:

> "10. An apparatus that creates a multimedia business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational environment, comprising: (a) a processor;"

Claim 45's "(b) a memory that stores information under the control of the processor;" is anticipated by Zadik et al, claim 10, where it recites: "(c) a display under the control of the processor;"

Claim 45's "(c) logic that presents information indicative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the

information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative of a goal;"** (emphasis added).

Claim 45's "(d) logic that integrates information that motivates accomplishment of the goal;" is anticipated by Zadik et al, claim 10. where it recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further **motivates accomplishment** of the goal in the simulated environment."

Claim 45's "(e) logic that queries a user for answers to one or more questions based on more or more learning objectives of the presentation using a simulated human conversation; and" is anticipated by Zadik et al, claim 7, where it recites:

> " 7. A method for creating a business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational learning experience as recited in claim 1, including the step of **simulating a conversation** in the simulated environment."

Claim 45's "(f) logic that monitors progress toward the goal and provides feedback that further motivates accomplishment of the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor

> comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 46

Claim 46's " 46. An apparatus that creates a presentation as recited in claim 45, including logic that indexes media information to enhance the integration of the media information into the presentation.." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using an index is well within the broadest reasonable interpretation of this prior art. The fact that the use of an index is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 153, fin. 17-19), where it recites: "When the user selects a month, the application uses the **index** of the combobox to find the ControlSourceItem and pass that to the simulation engine."

Claim 47

Claim 47's " 47. An apparatus that creates a presentation as recited in claim 45, including logic that **synchronizes** the media information with other information in the presentation utilizing time and the **indexing**." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning

> information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using an index is well within the broadest reasonable interpretation of this prior art. The fact that the use of an index is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, col. 153, fin. 17-19), where it recites: "When the user selects a month, the application uses the **index** of the combobox to find the ControlSourceItem and pass that to the simulation engine."

Also, (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 49

Claim 49's " 49. An apparatus that creates a presentation as recited in claim 45, wherein the media information comprises video information." is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed

by a profiling component to motivate accomplishment of the goal; and

Using video information is well within the broadest reasonable interpretation of this prior art. The fact that the use of video information is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Abstract (Zadik et al, Abstract), where it recites:

"A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 50

Claim 50's "50. An apparatus that creates a presentation as recited in claim 45, wherein the media information comprises audio information." is anticipated by Zadik et al, col. 15, lin. 66-67; col. 16, lin. I-13, where it recites:

"During the build **phase, the application development team** uses the detailed designs to code the application. Coding tasks include the interfaces and widgets that the student interacts with. The interfaces can be made up of buttons, grids, check boxes, or any other screen controls that allow the student to view and manipulate his deliverables. The developer must also code logic that analyzes the student's work and provides feedback interactions. These interactions may take the form of text and/or multimedia feedback from simulated team members, conversations with simulated team members, or direct manipulations of the student's work by simulated team members. In parallel with these coding efforts, graphics, videos, and audio are being created for use in the application-

> Managing the development of these assets have their own complications."

Claim 51

Claim 51's "51. An apparatus that creates a presentation as recited in claim 45, wherein the media information comprises **dialog information**." is anticipated by Zadik et al, col. 8, lin. 8-20, where it recites:

> "Class libraries are very flexible. As programs grow more complex, more programmers are forced to reinvent basic solutions to basic problems over and over again. A relatively new extension of the class library concept is to have a framework of class libraries. This framework is more complex and consists of significant collections of collaborating classes that capture both the small scale patterns and major mechanisms that implement the common requirements and design in a specific application domain. They were first developed to free application programmers from the chores involved in displaying menus, windows, **dialog boxes**, and other standard user interface elements for personal computers."

Claim 52

Claim 52's "52. An apparatus that creates a presentation as recited in claim 45, wherein the media information comprises Internet information." is anticipated by Zadik et al, col. 9, lin.34-67; col. 10, lin. 1-10, where it recites:

> "Thus, through the development of frameworks for solutions to various problems and programming tasks, significant reductions in the design and development effort for software can be achieved. A preferred embodiment of the invention utilizes HyperText Markup Language **(HTML) to implement documents on the Internet** together with a general-purpose secure communication protocol for a transport medium between the client and the Newco. HTTP or other protocols could be readily substituted for HTML without undue experimentation. Information on these products is available in T. Berners-Lee, D. Connoly, "RFC 1866: 1 lypertext Markup Language–2.0" (November, 1990; and R. Fielding, H, Frystyk, T. Bemers-Lee, J. Gettys and J. C. Mogul, "Hypertext Transfer Protocol–IFI-fP/LLHTTP Working Group Internet Draft" (May 2, 1996). H'fML is a simple data format used to create hypertext documents that are portable from one platform to another. HTML documents are SGML documents with generic semantics that are appropriate for representing information from a wide range of domains. HIM, has been in use by the World-Wide Web global information initiative since 1990. HTML is an application of ISO Standard 8879; 1986 Information Processing Text and Office Systems; Standard Generalized Markup Language (SGML)."

Claim 53

Claim 53's "53. An apparatus that creates a presentation as recited in claim 45, including logic that creates a multimedia presentation as recited in claim 46, wherein the media information comprises text information." is anticipated by Zadik et al, col. 15, lin. 66-67; col. 16, lin. 1-13, where it recites:

> "During the build phase, the application development team uses the detailed designs to code the application. Coding tasks include the interfaces and widgets that the student interacts with. The interfaces can be made up of buttons, grids, check boxes, or any other screen controls that allow the student to view and manipulate his deliverables. The developer must also code logic that analyzes the student's work and provides feedback interactions. These; interactions may take the form of text and/or multimedia feedback from simulated team members, conversations with simulated team members, or direct manipulations of the student's work by simulated team members. In parallel with these coding efforts, graphics, videos, and audio are being created for use in the application. Managing the development of these assets have their own complications."

Claim 54

Claim 54's "(a) presenting information indicative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative** of a -goal;" (emphasis added).

Claim 54's "(b) integrating information that motivates accomplishment of the goal; and" is anticipated by Zadik et al, claim 10, where it: recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further **motivates accomplishment** of the goal in the simulated environment."

Claim 54's "(c) monitoring progress toward the goal and providing feedback that further motivates accomplishment of the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information **feedback** from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 55

Claim 55's "55. A method for creating a presentation as recited in claim 54, including the step of linking information that motivates accomplishment of the goal to the presentation." is anticipated by Zadik et al, col. 25, lin. 49-59, where it recites:

> "As the design phase progresses, the designer adds more detail to the design of the Concept hierarchy by painting in Coach Topics that the student may need feedback on. The designer can associate multiple feedback topics with each Concept. The designer also characterizes each topic as being Praise, Polish, Focus, Redirect or one of several other types of feedback that are consistent with a proven remediation methodology. The designer can then fill each topic with text, video war stories, Web page **links**, Authorware **links**, or any other media object that can be delivered to the student as part of the **feedback** topic."

Claim 56

Claim 56's "56. A method for creating a presentation as recited in claim 54, including the step of monitoring user interactions to determine progress toward the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) **monitoring** answers to questions posed to evaluate **progress toward the goal** utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor

> comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 57

Claim 57's "57. A method for creating a presentation as recited in claim 54, including the step of organizing objects according to relevancy to progress toward the goal." is anticipated by Zadik et al, col. 31, lin. 51-62, where it recites:

> "The root directory of the Design and Src VB directory contain a few important files to note. Both have two .rtf files, a flew log files and an .ini file. The .rtf files are the feedback that is output from the tutor, the logs are also output from the tutor and the Am file is for ICAUtils initialization. The design directory has three subdirectories that contain a data directory, which stores .xls files, sim models, and any other important data like html and video. It also has a database directory that holds any relevant databases for development and application use. The last directory is the icadoc directory which includes all tut files or .ica files, which are both created with the tutor."

Claim 58

Claim 58's "58. A method for creating a presentation as recited in claim 54, including the step of calculating a quantitative degree of correctness to determine the progress toward the goal." is anticipated by Zadik et al, col. 53, lin. 17-20, where it recites: "(522) Praise level feedback is reserved for instances of **"correctness";** the deliverable is correct and ready to be used in the business."

Claim 61

Claim 61's "61. A method for creating a presentation as recited in claim 54, wherein the feedback is based on past information presented." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates

> individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 63

Claim 63's "(a) **a processor**;" is anticipated by Zadik et al, claim 10, where it recites:

> "10. An apparatus that creates a multimedia business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational environment, comprising: (a) **a processor**;"

Claim 63's "(b) a memory that stores information under the control of the processor;" is anticipated by Zadik et al, claim 10, where it recites: "(c) a display under the control of the processor;"

Claim 63's "(c) logic that presents information indicative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative** of a goal;" (emphasis added).

Claim 63's "(d) logic that integrates information that motivates accomplishment of the goal; and" is anticipated by Zadik et al, claim 10, where it recites:

> "(g) logic that monitors answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and provides goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages that further motivates accomplishment of the goal in the simulated environment."

Claim 63's "(e) monitoring progress toward the goal and providing feedback that further motivates accomplishment of the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information **feedback** from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 64

Claim 64's "64. An apparatus that creates a presentation as recited in claim 63, including logic that links information that motivates accomplishment of the goal to the presentation." is anticipated by Zadik et al, col. 25, lin. 49-59, where it recites:

> "As the design phase progresses, the designer adds more detail to the design of the Concept hierarchy by painting in Coach Topics that the student may need feedback on. The designer can associate multiple feedback topics with each Concept. The designer also characterizes each topic as being Praise, Polish, Focus, Redirect or one of several other types of feedback that are consistent with a proven remediation methodology. The designer can then fill each topic with text, video war stories, Web page links, Authorware links, or any other media object that can be delivered to the student as part of the feedback topic."

Claim 65

Claim 65's "65. An apparatus that creates a presentation as recited in claim 63, including logic that monitors user interactions to determine progress toward the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object

> component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 66

Claim 66's "66. An apparatus that creates a presentation as recited in claim 63, including logic that organizes objects according to relevancy to progress toward the goal." is anticipated by Zadik et al, col. 31, lin. 51-62, where it recites:

> "The root directory of the Design and SrcVB directory contain a few important tiles to note. Both have two .rtf files, a finv log files and an .ini file. The .rtf files are the feedback that is output from the tutor, the logs are also output from the tutor and the Am file is for ICAUtils initialization. The design directory has three subdirectories that contain a data directory, which stores .xls files, sim models, and any other important data like html and video. It also has a database directory that holds any relevant databases for development and application use. The last directory is the icadoc directory which includes all tut files or. lea files, which are both created with the tutor."

Claim 67

Claim 67's "67. An apparatus that creates a presentation as recited in claim 63, including logic that calculates a quantitative degree of correctness to determine the progress toward the goal." is anticipated by Zadik et al, col. 53, lin. 17-20, where it recites:

> (522) Praise level feedback is reserved for instances of "correctness"; the deliverable is correct and ready to be used in the business.

Claim 70

Claim 70's "70. An apparatus that creates a presentation as recited in claim 63, wherein the feedback is based on past information presented." is anticipated by Zadik et al, . claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 72

Claim 72's "(a) receiving indicia representative of a goal;" is anticipated by Zadik et al, claim 1(a), where it recites: "(a) accessing the information in the spreadsheet object component of the rule-based expert system to retrieve information **indicative of a goal;"** (emphasis added).

Claim 72's "(b) integrating examples into the presentation to provide assistance with achieving the goal; " is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Claim 72's "(c) monitoring progress of a student toward the goal;" is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and pro),-iding dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 72's "(d) providing feedback that further assists the student in accomplishing the goal; and" is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 72's "(e) providing information to assist with a next step in achieving the goal. " is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and **providing** dynamic, **goal-based,** remediation learning **information feedback** from a remediation object component including a knowledge system and a **software tutor** comprising an artificial intelligence engine which generates **individualized coaching** messages to further **motivate accomplishment of the goal** in the simulated environment."

Claim 73

Claim 73's "73. A method for creating a presentation as recited in claim 72, including the step of linking information that motivates accomplishment of the goal to the presentation." is anticipated by Zadik et al, col. 25, lin. 49-59, where it recites:

> "As the design phase progresses, the designer adds more detail to the design of the Concept hierarchy by painting in Coach Topics that the student may need feedback on. The designer can associate multiple feedback topics with each Concept. The designer also characterizes each topic as being Praise, Polish, Focus, Redirect or one of several other types of feedback that are consistent with a proven remediation methodology. The designer can then fill each

> topic with text, video war stories, Web page links, Authorware links, or any other media object that can be delivered to the student as part of the feedback topic."

Claim 74

Claim 74's "74. A method for creating a presentation as recited in claim 72, including the step of providing information that explains why the next step should be done." is anticipated by Zadik et al, col. 13, lin. 52-56, where it recites: "With a support system that **proactively assists** the worker in **performance of their job tasks at a higher level of competency,** productivity and customer satisfaction (both internal and external) would soar."

Claim 75

Claim 75's "75. A method for creating a presentation as recited in claim 72, including the step of providing information that explains how the next step should be done." is anticipated by Zadik et al, col. 13, lin. 52-56, where it recites: "With a support system that **proactively assists** the worker in **performance of their job tasks at a higher level of competency,** productivity and customer satisfaction (both internal and external) would soar."

Claim 76

Claim 76's "76. A method for creating a presentation as recited in claim 72, including the step of utilizing video clips as feedback. " is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning

> information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using a video clip is well within the broadest reasonable interpretation of this prior art. The fact that the use of a video clip is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 79

Claim 79's "79. A method for creating a presentation as recited in claim 72, wherein the feedback is based on past information presented." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 80

Claim 80's "80. A method for creating a presentation as recited in claim 72, including the step of providing information based on the presentation context." is anticipated by Zadik et al, col. 18, lin. 20-31, where it recites:

> "Substantive, useful feedback is a critical piece of any BusSim application. It is the main mechanism to communicate if actions taken by the student are helping or hurting them meet their performance objectives. The interpretation piece of the set of proposed commonalties takes the results of any analysis performed and makes sense of it. It takes the non-biased view of the world that the Analysis portion delivers (i.e., "Demand is up 3%") and places some evaluative context around it (Le., "Demand is below the expected 7°/"; you're in trouble!", or "Demand has exceeded projections of 1.5%; Great job!"). FIG. 5 illustrates commonalties in accordance with a preferred embodiment."

Claim 81

Claim 81's "(a) a processor;" is anticipated by Zadik et al, claim 10, where it recites:

> "10. An apparatus that creates a multimedia business simulation utilizing a rule-based expert system with a spreadsheet object component to provide a goal based educational environment, comprising: (a) a processor;"

Claim 81's "(b) a"memory that stores information under the control of the processor;" is anticipated by Zadik et al, claim 10, where it recites: "(c) a display under the control of the processor;"

Claim 81's "(c) logic that integrates examples into the presentation to provide assistance with achieving the goal; " is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and **providing** dynamic, **goal-based**, remediation learning **information feedback** from a remediation object component including a knowledge system and a **software tutor** comprising an artificial intelligence engine which generates **individualized coaching** messages to further **motivate accomplishment of the goal** in the simulated environment."

Claim 81's "(d) logic that monitors progress of a student toward the goal and provides feedback that further provides the student assistance in accomplishing the goal; and " is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information feedback from a remediation object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 81's "(e) logic that provides **information to assist** with a next step in achieving the goal." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and **providing** dynamic, **goal-based**, remediation learning **information feedback** from a remediation object component including a knowledge system and a **softwar tutor** comprising an artificial intelligence engine which generates

> **individualized coaching** messages to further **motivate accomplishm nt of th goal** in the simulated environment."

Claim 82

Claim 82's "82. An apparatus that creates a presentation as recited in claim 81, including logic that links information that motivates accomplishment of the goal to the presentation." is anticipated by Zadik et al, col. 25, lin. 49-59, where it recites:

> "As the design phase progresses, the designer adds more detail to the design of the Concept hierarchy by painting in Coach Topics that the student may need feedback on. **The designer can associate** multiple feedback topics with each Concept. The designer also characterizes each topic as being Praise, Polish, Focus, Redirect or one of several other types of feedback that are consistent with a proven remediation methodology. The designer can then fill each topic with text, video war stories, Web page links, Authorware links; or any other media object that can be delivered to the student as part of the feedback topic."

Claim 83

Claim 83's "83. An apparatus that creates a presentation as recited in claim 81, including logic that explains why the next step should be done." is anticipated by Zadik et al, col. 13, lin. 52-56, where it recites: "With a support system that **proactively assists** the worker in **performance of their job tasks at a higher level of competency**, productivity and customer satisfaction (both internal and external) would soar."

Claim 84

Claim 84's "84. An apparatus that creates a presentation as recited in claim 81, including logic that explains how the next step should be done." is

anticipated by Zadik et al, col. 13, lin. 52-56, where it recites: "With a support system that **proactiv ly assists** the worker in **performance of their job tasks at a higher level of competency,** productivity and customer satisfaction (both internal and external) would soar."

Claim 85

Claim 85's "85. An apparatus that creates a presentation as recited in claim 81, including a code segment that utilizes **video clips as feedback."** " is anticipated by Zadik et al, claim 1(b), where it recites:

> (b) utilizing the information in the spreadsheet object component of the rule-based expert system to **integrate** goal-based learning information in a structured, dynamic business simulation designed by a profiling component to motivate accomplishment of the goal; and

Using a video clip is well within the broadest reasonable interpretation of this prior art. The fact that the use of a video clip is within the scope of that anticipating disclosure is further illustrated by the supporting matter in the Specification (Zadik et al, Abstract), where it recites:

> "A system is disclosed that provides a goal based learning system utilizing a rule based expert training system to provide a cognitive educational experience. The system provides the user with a simulated environment that presents a business opportunity to understand and solve optimally. Mistakes are noted and remedial educational material presented dynamically to build the necessary skills that a user requires for success in the business endeavor. The system utilizes an artificial intelligence engine driving individualized and dynamic feedback-with **synchronized video and graphics** used to simulate; real-world environment and interactions. Multiple "correct" answers are integrated into the learning system to allow individualized learning experiences in which navigation through the system is at a pace controlled by the learner. A robust business model provides support for realistic activities and allows a user to experience real world consequences for their actions in a simulated

> environment and make decisions that entail realtime decision-making and synthesis of the educational material."

Claim 88

Claim 88's "88. An apparatus that creates a presentation as recited in claim 81, wherein the feedback is based on past information presented." is anticipated by Zadik et al, claim 1(c), where it recites:

> "(c) monitoring answers to questions posed to evaluate progress toward the goal utilizing the spreadsheet object component of the rule-based expert system and providing dynamic, goal-based, remediation learning information **feedback** from a **remediation** object component including a knowledge system and a software tutor comprising an artificial intelligence engine which generates individualized coaching messages to further motivate accomplishment of the goal in the simulated environment."

Claim 89

Claim 89's "89. An apparatus that creates a presentation as recited in claim 81, including logic that provides information based on the presentation context." is anticipated by Zadik et al, col. 18, lin. 20-31, where it recites:

> "Substantive, useful feedback is a critical piece of any BusSim application. It is the main mechanism to communicate If actions taken by the student are helping or hurting them meet their performance objectives. The interpretation piece of the set of proposed commonalties takes the results of any analysis performed and makes sense of it. It takes the non-biased view of the world that the Analysis portion delivers (i.e., "Demand is up 3%") and places some evaluative **context** around it (i.e., "Demand is below the expected 7%; you're in trouble!", or "Demand has exceeded projections of 1.5%; Great job!"). FIG. 5 illustrates commonalties in accordance with a preferred embodiment."

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Bertrand et al (U.S. Patent Number 6,493,690 B2; dated 12/10/2002; class 706; subclass 045) discloses a goal based educational system with personalized coaching.

B. Marshall (U.S. Patent Number 6,474,992 B2; dated 11/05/2002; class 434; subclass 167) discloses reference training tools for development of reading fluency.

C. Lannert et al (U. S. Patent Number 6,029,156; dated 02/22/2000; class 706; subclass 011) discloses a goal based tutoring system with behavior to tailor to characteristics of a particular user.

D. Nichols (U.S. Patent Number 6,023,692; dated 02/08/2000; class 706; subclass 014) discloses goal based tutoring system with behavior to control flow of presentation.

E. Bertrand et al (U.S. Patent Number 6,023,691; dated 02/08/2000; class 706; subclass 002) discloses a goal based simulator utilizing a spreadsheet architecture.

F. Dietrich et al (U.S. Patent Number 5,630,070; dated 05/13/1997; class 705; subclass 008) discloses an optimization of manufacturing resource planning.

G. Wojik et al (U.S. Patent Number 5,7.58,329; dated 05/26/1998; class 705; subclass 028) discloses a system for managing customer orders and method of implementation.

H. Wojik et al. (U.S. Patent Number 5,666,493; dated 09/09/1997; class 705; subclass 026) discloses a system for managing customer orders and method of implementation.

I. Eder (U. S. Patent Number 6,321,205 Bl; dated 11/20/2001; class 705; subclass 007) discloses a method and system for modeling and analyzing business improvement programs.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (703) 305-0027.

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WLS

13 February 2004

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